

CLAIMS

What is claimed is:

1. An imaging system having a camera for imaging a bound document having a plurality of pages, comprising:

5 a speaker for playing music, the music having an adjustable tempo; and
a controller in communication with the speaker for controlling the tempo of the music played by the speaker based at least in part on a rate of the imaging.

2. The imaging system of claim 1, the imaging system has a maximum capture
10 rate, wherein the controller limits the tempo of the music to a maximum tempo based on the maximum image capture rate.

3. The imaging system of claim 1, wherein captured images have an image error rate and wherein the controller controls the tempo of the music based also on the
15 image error rate.

4. The imaging system of claim 1, further comprising an optical character recognition (OCR) engine in communication with the camera for receiving at least a portion of the image data therefrom for OCR processing.

20 5. The imaging system of claim 4, wherein the OCR engine performs OCR processing only on data corresponding to a border region to each imaged page.

6. The imaging system of claim 5, wherein the border region is selected from the group consisting of a border region around an entire perimeter of the imaged page and a border region around a portion of the perimeter of the imaged page.

5 7. The imaging system of claim 4, wherein the controller is configured to receive data from the OCR engine and to determine page numbers on the pages being imaged based at least in part on the data received from the OCR engine.

8. The imaging system of claim 7, wherein the controller is configured to track
10 the sequence of the page numbers of the images captured by the camera.

9. The imaging system of claim 8, wherein the controller is configured to detect an error based on the sequence of the page numbers and to generate an audio signal at the speaker when an error is detected.

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10. The imaging system of claim 8, wherein the controller is configured to detect an error when the controller fails to detect page numbers on a predetermined consecutive pages of the document and to generate an audio signal at the speaker when an error is detected.

20 11. The imaging system of claim 7, wherein the controller is configured to determine the page numbers based also on a location of a pointer positioned on a page of the bound document.

12. The imaging system of claim 11, wherein the pointer is selected from the group consisting of a finger of an operator, a sheath placed over finger of the operator, a portion of a glove worn by the operator, an image target, an annular ring, a light pointer, and a laser pointer.

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13. The imaging system of claim 11, wherein the OCR engine performs OCR processing only on data corresponding to a region of each imaged page, the region being substantially less than the entire imaged page, the region being determined based on the location of the pointer.

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14. The imaging system of claim 11, further comprising a sensor in communication with the controller and configured to detect the location of the pointer.

15. The imaging system of claim 14, wherein the sensor is further configured to detect at least one of an intrusion into an image area of the camera and insufficient light cast on the pages of the bound volume.

16. An imaging system for imaging a bound document having a plurality of pages, comprising:

an optical character recognition (OCR) engine for receiving at least a portion of image data, the OCR engine configured to perform OCR processing only on data corresponding to at least a portion of a border region of each imaged page; and

a controller in communication with the OCR engine and configured to receive data from the OCR engine to determine page numbers on the pages being imaged based at least in part on the data received from the OCR engine, the controller being further configured to detect an error based on the page numbers.

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17. The imaging system of claim 16, wherein the controller is further configured to detect an error when the controller fails to detect page numbers on a predetermined consecutive pages of the document.

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18. The imaging system of claim 16, wherein the controller is further configured to track the sequence of the page numbers of the images captured and to detect an error based on the sequence of the page numbers.

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19. The imaging system of claim 16, wherein the border region is selected from the group consisting of a border region around an entire perimeter of the imaged page and a border region around a portion of the perimeter of the imaged page.

20. The imaging system of claim 16, further comprising a speaker in communication with the controller, wherein the controller is configured to generate an audio signal at the speaker when an error is detected.

21. The imaging system of claim 16, wherein the controller is configured to
5 determine the page numbers based also on a location of a pointer positioned on a page of the bound document.

22. The imaging system of claim 21, wherein the pointer is selected from the group consisting of a finger of an operator, a sheath placed over finger of the operator, a
10 portion of a glove worn by the operator, an image target, an annular ring, a light pointer, and a laser pointer.

23. The imaging system of claim 21, wherein the OCR engine performs OCR processing only on data corresponding to a region of each imaged page, the region being
15 substantially less than the entire imaged page, the region being determined based on the location of the pointer.

24. The imaging system of claim 21, further comprising a sensor in communication with the controller and configured to detect the location of the pointer.

25. The imaging system of claim 24, wherein the sensor is further configured to detect at least one of an intrusion into an image area of the camera and insufficient light cast on the pages of the bound volume.

5 26. The imaging system of claim 16, further comprising a speaker for playing music having an adjustable tempo, the controller being configured to adjust the tempo of the music based on an error rate as detected by the controller.

27. The imaging system of claim 26, wherein the controller is configured to
10 adjust the tempo of the music played by the speaker based on an imaging rate.

28. The imaging system of claim 26, the imaging system having a maximum capture rate, wherein the controller is configured to limit the tempo of the music played by the speaker to a maximum tempo based on the maximum image capture rate.

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29. A method for imaging a bound document having multiple pages, the method comprising the steps of:

 playing music having an adjustable tempo through a speaker; and

 controlling the tempo of the music via a controller based on an image

20 capturing rate.

30. The method of claim 29, the imaging having a maximum capture rate, wherein the controlling the tempo includes limiting the tempo to a maximum tempo based on the maximum image capture rate.

5 31. The method of claim 29, further comprising the step of controlling the tempo of the music played by the speaker based on an image error rate.

32. The method of claim 31, further comprising the step of performing optical character recognition (OCR) processing on at least a portion of the image data using an OCR engine for detecting imaging errors.

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33. The method of claim 32, wherein the OCR processing is performed only on data corresponding to a border region to each imaged page.

34. The method of claim 33, wherein the border region is selected from the
15 group consisting of a border region around an entire perimeter of the imaged page and a border region around a portion of the perimeter of the imaged page.

35. The method of claim 32, further comprising the step of determining page numbers on the pages being imaged by the controlling based at least in part on the data
20 received from the OCR engine.

36. The method of claim 35, further comprising the step of tracking the sequence of the page numbers of the images captured by the camera by the controller.

37. The method of claim 36, further comprising the steps of:
5 detecting an error based on the sequence of the page numbers by the controller; and
generating an audio signal at the speaker when an error is detected by the controller.

10 38. The method of claim 36, further comprising the steps of:
detecting an error when the controller fails to detect page numbers on a predetermined consecutive pages of the document; and
generating an audio signal at the speaker when an error is detected.

15 39. The method of claim 35, wherein the step of determining page numbers is based also on a location of a pointer positioned on a page of the bound document.

40. The method of claim 39, wherein the pointer is selected from the group consisting of a finger of an operator, a sheath placed over finger of the operator, a portion
20 of a glove worn by the operator, an image target, an annular ring, a light pointer, and a laser pointer.

41. The method of claim 39, wherein the step of performing OCR processing comprising performing OCR processing only on data corresponding to a region of each imaged page, the region being substantially less than the entire imaged page, the region being determined based on the location of the pointer.

5 42. The method of claim 39, further comprising the step of detecting the location of the pointer with a sensor in communication with the controller.

43. The method of claim 42, further comprising the step of detecting with the sensor at least one of an intrusion into an image area of the camera and insufficient light
10 cast on the pages of the bound volume.

44. A method for imaging a bound document having multiple pages, the method comprising the steps of:

 performing optical character recognition (OCR) processing by an OCR
15 engine only on data corresponding to at least a portion of a border region of each imaged page, the image data being received from the camera;

 determining, by a controller, page numbers on the pages being imaged based at least in part on the data received from the OCR engine; and

 detecting an error based on the page numbers.

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45. The method of claim 44, wherein the border region is selected from the group consisting of a border region around an entire perimeter of the imaged page and a border region around a portion of the perimeter of the imaged page.

5 46. The method of claim 44, further comprising the step of tracking, by the controller, the sequence of the page numbers of the images captured by the camera.

47. The method of claim 46, further comprising the steps of:
detecting an error when the controller fails to detect page numbers on a
10 predetermined consecutive pages of the document; and
generating an audio signal at a speaker when an error is detected

48. The method of claim 46, further comprising the steps of:
detecting an error based on the sequence of the page numbers; and
generating an audio signal through a speaker when an error is detected.

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49. The method of claim 44, wherein the step of determining the page numbers is based also on a location of a pointer positioned on a page of the bound document.

50. The method of claim 49, wherein the pointer is selected from the group
20 consisting of a finger of an operator, a sheath placed over finger of the operator, a portion of a glove worn by the operator, an image target, an annular ring, a light pointer, and a laser pointer.

51. The method of claim 49, wherein the OCR processing is performed only on data corresponding to a region of each imaged page, the region being substantially less than the entire imaged page, the region being determined based on the location of the pointer.

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52. The method of claim 49, further comprising the step of detecting the location of the pointer with a sensor in communication with the controller.

53. The method of claim 53, further comprising the step of detecting, with the
10 sensor, at least one of an intrusion into an image area of the camera and insufficient light cast on the pages of the bound volume.

54. The method of claim 44, further comprising the steps of:
playing music on a speaker, the music having a tempo; and
15 adjusting, by the controller, the tempo based on an image error rate.

55. The method of claim 54, further comprising the step of adjusting, by the controller, the tempo of the music played by the speaker based on the imaging rate.

20 56. The method of claim 54, the imaging having a maximum capture rate, wherein the adjusting the tempo includes limiting the tempo to a maximum tempo based on the maximum image capture rate.